Appl. No.: 10/706,861 Amdt. dated 7/11/2006

Reply to Office Action of April 11, 2006



Amendments to the Claims:

1. (Currently Amended) A composition for forming porous film, comprising a surfactant and

a solution comprising polymer obtainable by hydrolyzing and condensing, in the presence of the surfactant, one or more alkoxysilanes represented by Formula (1) and one or more alkoxysilanes represented by Formula (2):

$$(R^1)_m Si(OR^2)_{4-m}$$

(1)

$$R^3Si(R^4)_n(OR^5)_{3-n}$$

(2)

wherein R¹ represents a monovalent hydrocarbon group which may be substituted or non-substituted and when there are R¹s, the R¹s are independently the same or different; R² represents an alkyl group having 1 to 4 carbons and when there are R²s, the R²s are independently the same or different; R³ represents a straight chain or branched alkyl group having 8 to 30 carbons; R⁴ represents a monovalent hydrocarbon group which may be substituted or non-substituted and when there are R⁴s, the R⁴s are independently the same or different; R⁵ represents an alkyl group having 1 to 4 carbons and when there are R⁵s, the R⁵s are independently the same or different; m is an integer of 0 to 3; and n is an integer of 0 to 2,

wherein said one or more alkoxysilanes represented by Formula (2) is present in an amount of 0.01 to 10 parts by weight to 100 parts by weight of said one or more alkoxysilanes represented by Formula (1).

- 2. (Original) The composition for forming porous film according to Claim 1 wherein said surfactant is a compound which decomposes, evaporates or sublines when heated to 400°C or less.
 - (Canceled)
- 4. (Previously Presented) The composition for forming porous film according to Claim 1 wherein said one or more of the alkoxysilanes represented by Formula (1) is 10% by. weight or more of tetraalkoxysilane.

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- 5. (Previously Presented) The composition for forming porous film according to Claim 1, comprising a compound which is neutral at ordinary temperature and generates acid or alkali at 80 to 200°C.
- 6. (Previously Presented) A method for forming porous film comprising a step of applying said composition of Claim 1 on a substrate to form film and a step of transforming the film into porous film.
- 7. (Original) The method for forming porous film according to Claim 6 wherein said step of transforming comprises a step of drying said film and a step of removing said surfactant from the dried film.
- 8. (Previously Presented) The method for forming porous film according to Claim 6 wherein said step of transforming comprises heating at 150 to 400°C.
- 9. (Previously Presented) A porous film obtainable from said composition of Claim1.
- 10. (Previously Presented) An interlevel insulator film formable by said composition of Claim 1.
- 11. (Currently Amended) A semiconductor device comprising internal porous film which is formable by a composition for forming porous film, comprising
 - a surfactant and

a solution comprising polymer obtainable by hydrolyzing and condensing, in the presence of the surfactant, one or more of alkoxysilane represented by Formula (1) and one or more of alkoxysilane represented by Formula (2):

$$(R^1)_m Si (OR^2)_{4-m}$$
 (1)

$$R^3Si(R^4)_n(QR^5)_{3-n}$$
 (2)

wherein R^1 represents a monovalent hydrocarbon group which may be substituted or non-substituted and when there are R^1 s, the R^1 s are independently the same or different; R^2 represents

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an alkyl group having 1 to 4 carbons and when there are R²s, the R²s are independently the same or different; R³ represents a straight chain or branched alkyl group having 8 to 30 carbons; R⁴ represents a monovalent hydrocarbon group which may be substituted or non-substituted and when there are R⁴s, the R⁴s are independently the same or different; R⁵ represents an alkyl group having 1 to 4 carbons and when there are R⁵s, the R⁵s are independently the same or different; m is an integer of 0 to 3; and n is an integer of 0 to 2,

wherein said one or more alkoxysilanes represented by Formula (2) is present in an amount of 0.01 to 10 parts by weight to 100 parts by weight of said one or more alkoxysilanes represented by Formula (1).

12. (Original) The semiconductor device according to Claim 11 wherein said surfactant is a compound which decomposes, evaporates or sublimes when heated to 400°C or less.

13. (Canceled)

- 14. (Previously Presented) The semiconductor device according to Claim 11 wherein said one or more of the alkoxysilanes represented by Formula (1) is 10% by weight or more of tetraalkoxysilane.
- 15. (Previously Presented) The semiconductor device according to Claim 11, comprising a compound which is neutral at ordinary temperature and generates acid or alkali at 80 to 200°C.
- 16. (Previously Presented) The semiconductor device according to Claim 11 wherein said porous film is between metal interconnections in a same layer of multi-level interconnects, or is between upper and lower metal interconnection layers.